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(71) We, UNILEVER LIMITED, a company organised under the laws of Great Britain, of Unilever House, Blackfriars, London E.C.4, England, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to tea.

Tea is at present mainly sold in the form either of black leaf tea or of the hot-water-soluble solids of tea ("instant tea"). These teas have significant differences in properties and in use. Instant tea is much more quickly infused or brewed; on the other hand, the liquor brewed from it tends to be flat in comparison with the pleasant astringency or "briskness" of a liquor brewed from the better grades of black leaf tea. However, many of the cheaper black leaf teas of commerce are unpleasantly harsh or bitter when used alone, and have to be blended with leaf of higher grade in order to yield an acceptable liquor.

The present invention provides a process for the preparation of a composite tea product comprising black leaf tea and hot-water-soluble solids of fermented tea, in which process a mixture of black leaf tea and powdered hot-water-soluble solids of tea is wetted by spraying thereon water in an amount of from 2 to 15% by weight of the unwetted mixture while the mixture is stirred, and the wetted mixture so formed is dried to produce a free-flowing conglomerate of black leaf tea and hot-water-soluble solids of fermented tea.

The composite tea product of the present invention is based on both black leaf tea and instant tea, and to a considerable extent combines the desirable properties of both. Additionally, the invention can be applied to the treatment of the cheaper grades of black leaf tea to improve the quality, colour and aroma of the liquor obtainable from them and to diminish their harshness.

The tea product of the invention com-

prises black leaf tea coated with instant tea, i.e. with the hot-water-soluble solids of fermented tea. The coating may take the form of a film of solids that partly or wholly covers the leaf; or the hot-water-soluble solids may be in the form of discrete particles adhering to the leaf surface.

The weight ratio of leaf tea:hot water-soluble tea solids in the product is preferably from 3:1 to 12:1.

The tea product is made by spraying a small quantity of water (2 to 15% by weight of the total tea ingredients) onto a stirred mixture of black leaf tea and powdered hot-water-soluble tea solids ("instant tea") to produce a slurry of leaf tea in an aqueous medium containing instant tea partly in solution and partly in suspension. The slurry is then dried in air, preferably to the moisture content of black leaf tea (usually about 4 to 6% by weight) to ensure a similar storage life to conventional tea. The method of drying is not critical. Examples of suitable driers are fluidised bed driers and up-draught air driers.

The leaf tea may be coated with other materials besides the instant tea, for example with a buffering agent (such as citric and ascorbic acids and their salts) to improve the colour of the liquor obtainable on infusion. Such buffering agents are suitable used in amounts up to 2% by weight of the total weight of tea.

The tea product is particularly suitable for packing in tea bags, including the large tea bags used in the catering trade, and it can also be used in leaf-based tea vending machines or packaged as tea for household use.

The invention is further illustrated by the following Example.

EXAMPLE

865 g of a cheap black leaf tea blend were mixed in a conventional food mixer with 135 g of a conventional instant tea powder, obtained by hot water extraction of fermented unfired tea followed by drying the aqueous extract and milling the dried pro-

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duct; 95% of the instant tea passed BSS 100, and 50% of it passed BSS 200.

Cold water (40 g) was sprayed onto the stirred mixture over a period of 5 minutes, and the resulting slurry or suspension of (i) black tea leaf and hot-water-soluble tea solids not dissolved by the cold water in (ii) an aqueous solution of tea solids was dried in an updraught air drier at 50°C to remove excess water.

The free-flowing product had the general appearance of leaf tea, but when inspected under the microscope was seen to consist of leaf tea whose leaves were partly covered with a thin film of tea solids and also had discrete particles of tea solids adhering to them. Substantially all the instant tea powder employed had been deposited onto the tea leaf in one form or the other.

The procedure of the above Example can equally well be operated with the use of instant tea derived from fermented fired tea i.e. from black leaf tea itself.

The product was packed into conventional tea bags, with 1.9 g packed into each bag.

A comparative experiment was carried out using the following samples:

(a) tea bags containing 1.9 g of the product of the invention as described above

(b) tea bags containing 2.8 g of the cheaper leaf tea blend alone

(c) tea bags containing 2.8 g of a superior leaf tea blend.

Tea liquors were prepared from each sample under identical conditions and submitted to a panel. Little difference was observed between *a* and *c*, though a slight preference was shown for *a*; *b* was described as unpleasantly harsh and bitter.

WHAT WE CLAIM IS:—

1. A process for the preparation of a

composite tea product comprising black leaf tea and hot-water-soluble solids of fermented tea, in which process a mixture of black leaf tea and powdered hot-water-soluble solids of tea is wetted by spraying thereon water in an amount of from 2 to 15% by weight of the unwetted mixture while the mixture is stirred, and the wetted mixture so formed is dried to produce a free-flowing conglomerate of black leaf tea and hot-water-soluble solids of fermented tea.

2. A process as claimed in Claim 1, wherein the weight ratio of black leaf tea to powdered hot-water-soluble solids of fermented tea is from 3:1 to 12:1.

3. A process as claimed in Claim 1 or Claim 2, wherein the unwetted mixture of black leaf tea and powdered hot-water-soluble solids of fermented tea additionally comprises a buffering agent in an amount up to 2% by weight of the total weight of tea.

4. A process as claimed in Claim 3, wherein the buffering agent is citric acid or ascorbic acid.

5. A process as claimed in Claim 3, wherein the buffering agent is a salt of citric acid or a salt of ascorbic acid.

6. A process as claimed in Claim 1, substantially as hereinbefore described with reference to the Example.

7. A free-flowing conglomerate of black leaf tea and hot-water-soluble solids of fermented tea, prepared by a process as claimed in any one of the preceding Claims.

8. A tea bag containing a free-flowing conglomerate of black leaf tea and hot-water-soluble solids of fermented tea as claimed in Claim 7.

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